



## THE ACM DIGITAL LIBRARY

Feedback Report a problem Satisfaction survey

Published since January 1947 and Published before September 2000  
Terms used [flow classification](#) [packet filter](#) [firewall](#)

Found 5 of 98,357

Sort results by

Save results to a Binder

Try an Advanced Search

Display results

Search Tips

Try this search in The ACM Guide

Open results in a new window

Results 1 - 5 of 5

Relevance scale

### 1 Router plugins: a software architecture for next-generation routers

Dan Decasper, Zubin Dittia, Guru Parulkar, Bernhard Plattner  
February 2000 **IEEE/ACM Transactions on Networking (TON)**, Volume 8 Issue 1

Full text available: pdf(530.34 KB)

Additional Information: [full citation](#) [references](#) [citing](#) [index terms](#)

**Keywords:** communication system routing, communication system security, internet, modular computer systems

### 2 Router plugins: a software architecture for next generation routers

Dan Decasper, Zubin Dittia, Guru Parulkar, Bernhard Plattner  
October 1998 **ACM SIGCOMM Computer Communication Review , Proceedings of the ACM SIGCOMM '98 conference on Applications, technologies, architectures, and protocols for computer communication**, Volume 28 Issue 4

Full text available: pdf(1.82 MB)

Additional Information: [full citation](#) [abstract](#) [references](#) [citing](#) [index terms](#)

Present day routers typically employ monolithic operating systems which are not easily upgradable and extensible. With the rapid rate of protocol development it is becoming increasingly important to dynamically upgrade router software in an incremental fashion. We have designed and implemented a high performance, modular, extended integrated services router software architecture in the NetBSD operating system kernel. This architecture allows code modules, called *plugins*, to be dynamically ...

**Keywords:** high performance integrated services routing, modular router architecture, router plugins

### 3 Packet classification on multiple fields

Pankaj Gupta, Nick McKeown  
August 1999 **ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Applications, technologies, architectures, and protocols for computer communication**, Volume 29 Issue 4

Full text available: pdf(1.46 MB)

Additional Information: [full citation](#) [abstract](#) [references](#) [citing](#) [index terms](#)

Routers classify packets to determine which flow they belong to, and to decide what service they should receive. Classification may, in general, be based on an arbitrary number of fields in the packet header. Performing classification quickly on an arbitrary number of fields is known to be difficult, and has poor worst-case performance. In this paper, we consider a number of classifiers taken from real networks. We find that the classifiers contain considerable structure and redundancy that can ...

### 4 The click modular router

Eddie Kohler, Robert Morris, Benjie Chen, John Jannotti, M. Frans Kaashoek  
August 2000 **ACM Transactions on Computer Systems (TOCS)**, Volume 18 Issue 3

Full text available: pdf(379.31 KB)

Additional Information: [full citation](#) [abstract](#) [references](#) [citing](#) [index terms](#)

Clicks is a new software architecture for building flexible and configurable routers. A Click router is assembled from packet processing modules called elements. Individual elements implement simple router functions like packet classification, queuing, scheduling, and interfacing with network devices. A router configurable is a directed graph with elements at the vertices; packets flow along the edges of the graph. Several features make individual elements more powerful and ...

**Keywords:** component systems, routers, software router performance

**IP switching—ATM under IP**Peter Newman, Greg Minshall, Thomas L. Lyon  
April 1998**IEEE/ACM Transactions on Networking (TON), Volume 6 Issue 2**Full text available:  pdf (154.32 KB)Additional Information: [full citation](#), [references](#), [citing](#), [index terms](#)**Keywords:** Internet protocol, asynchronous transfer mode, broadband communication, communication system control, data communication, packet switching, protocols

Results 1 - 5 of 5

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2004 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)